

**TI-670M**

Version 1.1

Date of last issue: 2017/05/23

Revision Date: 2019/01/28

Date of first issue: 2017/05/23

**1. PRODUCT AND COMPANY IDENTIFICATION****Product name** : TI-670M**Recommended use of the chemical and restrictions on use**

Recommended use : Raw material for industry

Restrictions on use : Prohibition of recommendation applications outside of use

**Manufacturer or supplier's details**

Company : LOTTE Chemical Corporation

Address : Lotte World Tower, 300, Olympic-ro, Songpa-gu, Seoul, 05551  
Rep. of KOREATelephone : Head-Office 82-2-829-4190  
Yeosu Plant 82-61-688-2021  
Daesan Plant 82-41-689-5800  
Ulsan Plant 82-52-278-3421Emergency telephone number : Head-Office 82-2-829-4190  
Yeosu Plant 82-61-688-2021  
Daesan Plant 82-41-689-5800  
Ulsan Plant 82-52-278-3421

Telefax : 82-2-834-6070

**2. HAZARDS IDENTIFICATION****GHS Classification**

This material is not classified as hazardous under the Article 39 Paragraph 1 of the Industrial Safety and Health Act (ISHA). It is not regulated for the MSDS creation and labeling by the provision of Article 41 Paragraph 1 of the ISHA.

**GHS label elements**

This material is not classified as hazardous under the Article 39 Paragraph 1 of the Industrial Safety and Health Act (ISHA). It is not regulated for the MSDS creation and labeling by the provision of Article 41 Paragraph 1 of the ISHA.

**Other hazards which do not result in classification**

According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified.

**NFPA Grade(0~4 level)**

Health 1, Fire 1, Instability 0

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Components**

Chemical name	Common Name	CAS-No.	Concentration (%)
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1-Propene, polymer with ethene	1-Propene, polymer with ethene	9010-79-1	>= 95 ~ <= 100
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**4. FIRST AID MEASURES**

General advice	: Do not leave the victim unattended.
In case of eye contact	: Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
In case of skin contact	: If skin irritation persists, call a physician.
If inhaled	: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
If swallowed	: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: None known.
Protection of first-aiders	: Keep the medical staff know about the substance to take protective measures
Notes to physician	: Inform the healthcare personnel of the contamination situation and have them take appropriate protective measures

**5. FIREFIGHTING MEASURES****Suitable and unsuitable extinguishing media**

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	: High volume water jet
<b>Specific hazards during firefighting</b>	: No data available
Hazardous combustion products	: inhalation of combustion products may be harmful
Specific extinguishing methods	: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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**Special protective equipment for firefighters** : Wear self-contained breathing apparatus for firefighting if necessary.

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**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Avoid dust formation.

Environmental precautions : Try to prevent the material from entering drains or water courses.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.  
Sweep up and shovel.  
Keep in suitable, closed containers for disposal.

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**7. HANDLING AND STORAGE**

Advice on safe handling : For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.

Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No materials to be especially mentioned.

Recommended storage temperature : 21 - 23 °C

Storage period : No data available

Packaging material : Unsuitable material: Keep container closed to avoid excessive dust accumulation and prevent contamination.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Engineering measures** : Ensure adequate ventilation and exhaust ventilation at the workplace.

**Personal protective equipment**

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Safety glasses

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Skin and body protection : Protective suit  
Hygiene measures : General industrial hygiene practice.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Solid form  
Colour : translucent  
Odour : odourless  
Odour Threshold : No data available  
pH : Not applicable  
Melting point/range : 130 - 170 °C  
Boiling point/boiling range : Not applicable  
Flash point : Not applicable  
Evaporation rate : Not applicable  
Flammability (solid, gas) : No data available  
Flammability (liquids) : No data available  
Burning rate : No data available  
Self-ignition : No data available  
Burning number : No data available  
Upper explosion limit / Upper flammability limit : Not applicable  
Lower explosion limit / Lower flammability limit : Not applicable  
Vapour pressure : Not applicable  
Bulk density : No data available  
Solubility(ies)  
Water solubility : insoluble  
Solubility in other solvents : No data available  
Relative vapour density : Not applicable  
Relative density : No data available  
Density : 0.89 - 0.91 g/cm<sup>3</sup>  
Partition coefficient: n- : No data available

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octanol/water

Auto-ignition temperature	:	> 380 °C
Decomposition temperature	:	> 300 °C
Self-Accelerating decomposition temperature (SADT)	:	No data available
Temperature of Polymerisation (SAPT)	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Flow time	:	No data available
Solvent separation	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Self-heating substances	:	No data available
Heat of combustion	:	No data available
Impact sensitivity	:	No data available
Surface tension	:	No data available
Conductivity	:	No data available
Molecular weight	:	> 1,000 g/mol
Minimum explosible dust concentration	:	No data available
Dust deflagration index (Kst)	:	No data available
Dust explosion class	:	No data available
Radioactivity	:	No data available
Metal corrosion rate	:	No data available
Particle size	:	No data available
Particle Size Distribution	:	No data available

**10. STABILITY AND REACTIVITY**

Chemical stability and possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Stable under recommended storage conditions.
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No hazards to be specially mentioned.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Combustible material

Hazardous decomposition products : No data available

## 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data available

### Health hazard information

#### Acute toxicity

**Product:**

Acute oral toxicity : LD50 (Rat): > 8,000 mg/kg

#### Skin corrosion/irritation

**Product:**

Remarks: Non-irritating at room temperature but in contact with hot molten resin can cause severe burned.

#### Serious eye damage/eye irritation

**Product:**

Remarks: In direct contact with resin may includes irritating and redness.

#### Respiratory or skin sensitisation

**Product:**

Remarks: Resin itself is inert and harmless but dust may includes respiratory tract irritation and coughing.

#### Carcinogenicity

**Product:**

Result: IARC : Group 3

#### Germ cell mutagenicity

No data available

#### Reproductive toxicity

No data available

#### STOT - single exposure

No data available

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### STOT - repeated exposure

No data available

### Aspiration toxicity

#### Product:

No aspiration toxicity classification

### Further information

#### Product:

Remarks: No data available

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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

No data available

### Persistence and degradability

No data available

### Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: Not applicable

### Mobility in soil

#### Product:

Stability in soil : Remarks: Not expected to adsorb on soil.

### Other adverse effects

No data available

#### Product:

Additional ecological information : No known ecotoxicity. However, birds, fish and other wildlife can be affected if ingested by waterfowl or aquatic life.

### Hazardous to the ozone layer

Not applicable

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## 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

### Disposal precautions

Dispose of in accordance with local regulations.

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### 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

Not regulated as a dangerous good

##### IATA-DGR

Not regulated as a dangerous good

##### IMDG-Code

Not regulated as a dangerous good

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

EmS Code : Not applicable

Marine pollutant : Not applicable

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### National Regulations

Refer to section 15 for specific national regulation.

#### Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

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### 15. REGULATORY INFORMATION

#### National regulatory information

##### Regulation under the Occupational Safety and Health Act

##### Harmful Substances Prohibited from Manufacturing

Not applicable

##### Harmful Substances Required Permission for Manufacture

Not applicable

##### Hazardous substances requiring management

Not applicable

##### Controlled Substances Subject to Environment Monitoring

Not applicable

##### Controlled Substances Subject to Health Examination

Not applicable

##### Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

##### Toxic Chemicals

Not applicable

##### Restricted Chemicals

Not applicable



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**Prohibited Chemicals**

Not applicable

**Toxic Release Inventory**

Not applicable

**Accident Precaution Chemicals**

Not applicable

**Dangerous Substances Safety Management Act**

Not Applicable to Dangerous Materials

**Air Pollution Control Act****Hazardous Air Pollutants**

Not applicable

**Wastes Control Act**

Industrial waste

Follow article 13 of the act to dispose the product waste

**Other requirements in domestic and other countries****The components of this product are reported in the following inventories:**

REACH	:	
DSL	:	All components of this product are on the Canadian DSL
AICS	:	Not in compliance with the inventory
NZIoC	:	On the inventory, or in compliance with the inventory
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Not On TSCA Inventory
Framework Act on Fire Services	:	Special combustibles(Synthetic resin)

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

**16. OTHER INFORMATION****Further information**

# SAFETY DATA SHEET



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Sources of key data used to compile the Safety Data Sheet : Information taken from reference works and the literature., KOSHA, ECHA, NITE

### Revision number and date

Number of Revision : 1.1

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Other information

Date format : yyyy/mm/dd

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.